



CONSTRAINTS AND ENABLEMENT OF WORKPLACE DIGITALISATION: AN INTEGRATIVE REVIEW

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Abstract

The successful implementation of a digital workplace involves integrating information technology throughout all aspects of the organisation. The resulting changes are significant and wide-ranging, affecting the overall work environment. Numerous experts emphasize the importance of technology in establishing a digital workplace. However, it is important to acknowledge that digital transformation within the workplace presents its own set of challenges. As such, this study aims to identify the limitations associated with embracing a digital workplace and explore the various factors that impact the efficiency of employee digitalisation. In doing this an integrative review to explore the factors that constrain, and influence workplace digitalisation was employed. To do this, relevant studies were searched through reputable search engines such as Scopus, EBSCO, IEEE, Science Direct, Google Scholar, and Bing. In addition, a range of online resources which proved to be reliable sources of information on workplace digitalisation and the constraints and enablement therein were used. Furthermore, reputable journal articles, government reports, and biographies were also used with specific keywords to identify both primary and secondary sources of data. The research results indicate that the lack of accuracy, reliability, trustworthiness, and productive collaboration between humans and artificial intelligence technologies in the context of digitalizing the workplace poses a substantial obstacle to their acceptance, implementation, and successful integration. However, it revealed that adaptability human asset capability employee motivation, and well-defined digitalisation strategy are critical in the effective implementation of workplace digitalisation. The study facilitates an in-depth analysis of the existing constraints and strategies for workplace digitalisation. The aim is to offer valuable recommendations to managers and practitioners on the successful implementation of workplace digitalisation. This study is a novel attempt that aims to explore the challenges and barriers that impede the successful utilisation of the human resource management process of workplace digitalisation.

Keywords

Workplace Digitalisation, Data Safety, Digital Transformation, Employee Motivation, Digital Knowledge

Introduction and Statement of Problem

The COVID-19 pandemic has accelerated the adoption of digital work practices, which has highlighted the advantages of digital workplace technologies as well as their potential disadvantages. Digital technologies are widely integrated into various aspects of daily life and professional settings, offering both opportunities and difficulties for organisations, employers, and employees. Therefore, to harness the benefits of digital transformation, organisations must foster an innovative working environment and establish a culture that embraces digital advancements to retain clients, increase productivity, and preserve a talented workforce. Moreover, attaining success in the digitalisation of the workplace depends on the efficient execution of a digital workplace strategy, along with a transition in learning methodologies and organizational culture that encourages favourable staff conduct. Such strategies should align with technological solutions and facilitate their adoption for efficient work, communication, and collaboration. In line with the preceding assertion, the fourth industrial revolution, also known as Industry 4.0, presents numerous challenges for organisations. Firms operate in a rapidly changing and uncertain environment (Brahma, Nwafor, & Boateng, 2021). Technology affects not only the entire organisation but also the workplace itself. Meske and Junglas (2020; Meske, 2019) emphasize the lack of focus on the individual level of

digital transformation in the workplace, which includes the tools that either facilitate or impede the work. Considering the current conversation, the study provides valuable findings on the constraints and enablement's associated with implementing digitalisation in the workplace. The focus of the paper is on the factors that both support and hinder the successful implementation of digital transformation in the workplace. The paper's primary objective is to examine the factors influencing the effective implementation of digital transformation in the workplace. These factors have led to the adoption of a desktop-based approach exclusively for data collection.

Literature Review

This facet of the paper proffers an in-depth understanding of the concept of the digital workplace including the constraints and enablements.

Digital Workplace

The modern workplace necessitates both technological and organisational adaptation to transition from a traditional to a digital workplace. Changes in technology and society have influenced how communication, cooperation, and collaboration occur in the workplace. A digital workplace encompasses a variety of technologies and practices that improve employees' digital work experience, regardless of their physical location, surpassing traditional concepts of information and communication technologies (Marsh, Vallejos, and Spence, 2022). As stated by Dery, Sebastian, and Van Der Meulen (2017), a digital workplace refers to an integrated digital environment where various tools are utilised, ranging from enterprise resource planning software to social intranets (Nitschke et al. 2020), employee portals, and email systems (Zimmer, Baiyere, and Salmela, 2020), virtual meeting tools (Herrera et al. 2012), dashboards, feeds, alerts, and calendars (Attaran et al. 2019). According to Hamburg (2020), the digital workplace encompasses all the digital technologies and services utilised by individuals in their current work environment, including both existing and forthcoming ones.

Sharma (2022) argues that the incorporation of technology in the workplace has fostered a more flexible and dynamic setting for employees, providing benefits such as the ability to work remotely, collaborate effectively, exercise control, and coordinate tasks efficiently. These advantages have led to improved effectiveness and output, ultimately aiding in the timely attainment of organisational goals. To fully harness these benefits, it is crucial to successfully implement a digital workplace. It is worth noting, however, that despite the significant advantages offered by the digital workplace, there may be constraints to its implementation.

Constraints of Digital Workplace Implementation

When an organisation hastily embraces new digital tools, it frequently encounters the possibility of compounding issues rather than finding effective solutions. Kalischko and Riedl (2021) conducted a study on electronic performance monitoring to gain insights into the development, acceptance, and consequences of implementing electronic monitoring systems in work environments. The findings of the research reveal that heightened reliance on technology in the workplace may contribute to elevated stress levels among employees, resulting in feelings of exhaustion, disillusionment, and reduced work output, as well as diminished job contentment. Rakovic, Sakal and Mathovic (2022) identified the prevalent argument that the digital workplace presents both advantages and obstacles to businesses. Both organisations and individuals must comprehend and tackle these concerns to maximise the benefits of the digital workplace. An often-encountered difficulty is the matter of security and safeguarding of data. This encompasses apprehensions regarding the preservation of intellectual property rights, trade secrets, and research and development undertakings. Organisational activities also entail risks and necessitate protection. In understanding digital workplace implementation to promote gender equality, in a study conducted by Yalina (2019), interviews were conducted with four managers and eight women from different organisations to gain insights into workplace expectations. The interviews revealed that, from an organisational standpoint, the crucial factors to consider before implementing a digital workplace are management and financial issues, as well as the necessity for comprehensive employee training which is sometimes lacking in organisations. Horváth and Szabó (2019) conducted a qualitative case study, utilising semi-structured interviews with 26 members of company management, including digital directors and CEOs. In addition, the research included an analysis of company websites and annual reports to ensure the credibility and accuracy of the findings. The study highlighted that organisations may face obstacles in adopting Industry 4.0 technology due to concerns among employees and middle managers about its effectiveness, despite the potential transformative impact of the technology on management practices. Premised on the ongoing deliberation on the constraints of workplace digitalisation Raftopoulos and Hamari (2023) highlighted that the absence of precision, dependability, credibility, and effective human-machine interaction in the advancement of artificial intelligence technologies in terms of workplace digitalisation seems to present a significant barrier to their acceptance and implementation, as well as to the seamless integration of people and technology.

Enablers of Digital Workplace Implementation

Gorensek and Kohont (2019) assert that workplace digitalisation is having a significant impact on lifestyles and professional environments, leading to a more interconnected and technologically advanced future. As a result, organisations need to plan their digital transformation promptly, efficiently, and strategically to maintain competitiveness in the market. However, this is not without limitations as outlined in this article. Therefore, it is crucial to consider the favourable conditions that act as significant drivers for the successful implementation of a digital workplace. In studying the design of digital workplaces with a four-phase iterative approach with guidelines concerning virtuality and enterprise integration, Relva de Moraes, Rupino da Cunha and Ramos (2023) performed a systematic literature review (SLR) to explore strategies for organisations to effectively develop digital workplaces for their employees. The findings indicate the significance of incorporating objective criteria for evaluating work integration, in conjunction with the level of virtuality, to distinguish between various work environments.

Furthermore, Raftopoulos and Hamari (2023) conducted a preliminary investigation to examine the challenges and opportunities related to efficient interaction between humans and AI technology, focusing on end users. Based on the evidence gathered, it is apparent that organisations are increasingly recognising the advantages of implementing AI initiatives in various aspects such as enhanced communication, stakeholder involvement, efficient issue handling, ethical practices, and transparency. However, a considerable amount of effort is required to effectively address employee motivation, and empowerment, establish trust in AI technologies, and mitigate emerging cyber threats. In accordance with the previous statement regarding the factors that facilitated digital transformation in the workplace, a recent study conducted by Trenerry, Chng, Wang, Suhaila, Lim, Lu, and Oh (2021) examined the readiness of the workplace for digital transformation. The researchers reviewed research from various disciplines and synthesized the findings at different levels. The study identified five key factors that are individually associated with the digital transformation of the workforce: technology, understanding and adaptability to technological change, skills development and training, work restructuring and job replacement, and improved work efficiency. Additionally, the study highlighted three requirements for digital transformation within teams: effective team communication and collaboration, a strong connection between the office and the purchasing team, and the need for team restructuring and job redesign. Finally, the study proposed three essential elements of digital transformation within organisations: effective leadership, strategic human resource management, and fostering a culture and climate that supports digital transformation.

Research Methods

This study used an integrative review process to review and analyse literature on the constraints and enablers of workplace digitalisation. Souza, Silva, & Carvalho, (2010) state that an integrative review is concerned with a systematic process that connects acquired knowledge with the practical implementation of pertinent research. In addition, and in line with the preceding assertion an integrative review is a rigorous process in which researchers critically evaluate, summarise, and draw conclusions by thoroughly examining and analysing specific topics. (LoBiondo-Wood and Haber, 2010; Sparbel and Anderson, 2000; Torraco, 2005). According to Whittemore and Knaff, (2005), an integrative review is an in-depth and methodical approach that allows for the inclusion of both quantitative and qualitative research articles. This type of analysis is intricate and therefore requires a deeper understanding and a more efficient methodology (Torraco, 2005).

Data Collection

The integrative review examines the constraints and enablers of workplace digitalisation. In this regard, relevant studies were obtained from reputable search engines including Scopus, EBSCO, IEEE, Science Direct, Google Scholar, and Bing. Multiple online resources were accessed which demonstrated their value as reliable sources of information. Various sources of data, both secondary and primary, such as reputable journal articles, government reports, biographies, and others, were thoroughly searched across multiple search engines using specific keywords related to the challenges of workplace digitalisation and proven strategies for effective implementation of digital technologies in the workplace were used.

Data Synthesis and Extraction

Summarised data obtained from the included studies is provided. The highlighted information includes the year of publication, the names of the author(s), and the findings. Regardless of the quality of evidence, the results have been formulated to align with the criteria established for peer review, which encompass a wide range of available evidence (Whittemore and Knaff, 2005). The findings have been systematically organised and thematically analysed to identify more accurate correlations.

Results and Discussion

The articles examined studies that present perspectives on the constraints and enablements of implementing digitalisation in the workplace. The collective review of these studies analysed a total of 30 journals and articles, which were aimed at identifying factors that hinder or facilitate the process of workplace digitisation.

Key Themes

Stress Levels

In the contemporary professional environment, the trend of digitalisation in work and communication has experienced significant growth and is expected to further expand. This advancement has introduced various novel facets to working life, including virtual work teams, remote work options, the necessity of being consistently accessible, and the requirement for assistance in adapting to and mastering new digital tools. However, it is essential to acknowledge that these workplace transformations may potentially impact employee well-being and health.

Bregenzer and Jimenez (2021) conducted an online study with a hierarchical regression analysis of 1412 employees from Austria, Germany, and Switzerland. The study aimed to gather information regarding workplace risks, the health of managers who contributed to the study, and factors relating to work behaviours and stress levels. The results of the hierarchical regression analysis indicated that all four digital work risks (workgroup fragmentation, remote working, irregular work, and lack of support) were found to be associated with increased workplace stress. Additionally, the distinction between collective and unproductive work support was found to be linked to a decrease in work capital. Implementing a culture of health promotion that encourages performance improvement could mitigate these risks and improve overall employee well-being. Managers may experience heightened levels of stress, particularly when faced with limited opportunities for support in utilising and learning digital tools. Additionally, virtual team collaboration and mobile work can present additional leadership challenges, as physical separation may lead to cultural differences that affect employee health.

Data Security

Organisations should make it a priority to embrace digital transformation to accommodate employees' remote work preferences. In addition, the implementation of a digital workplace presents certain challenges and the possibility of negative effects on the private sector. However, it is important to acknowledge the fact that in recent times, the significance of ensuring robust cyber security measures in digital workplaces has escalated. This can be attained by establishing appropriate digital resources and organisational support. Muthuswamy and Nithya (2023) surveyed to gather important data from employees working in private organisations, to examine the influence of cybersecurity and cloud security, on the digital workplace in Saudi Arabia. The collected data was analysed using SPSS-AMOS to investigate the relationships between the different models. The findings indicate that in private organisations in Saudi Arabia, there is a connection between critical infrastructure and cloud security in digital workplaces. Furthermore, the results highlight the significant focus on digital knowledge and support within key organisations in the Saudi private sector, particularly in the areas of security, cloud security, and digital workplace.

High Cost of Software

A thorough investigation examines the various factors that impact and impede workplace digitalisation within the construction industry. Perera, Jin, Samaratunga, and Gunasekara (2023) conducted a comprehensive survey to investigate the impact of digitalisation on the construction industry in New South Wales, Australia. The survey included 542 participants, consisting of 347 designers and 195 builders, and the results were analysed with a 95% confidence level. The researchers utilised descriptive statistics to examine the responses of designers and builders on various organisational factors and employed statistical tests such as the Mann-Whitney U test and the Kruskal-Wallis H test to compare the data. To further validate the findings, interviews were conducted with key stakeholders including developers and software service providers. The results of the survey, cross-sectional analysis, and interviews were combined to gain a more comprehensive understanding of the factors and challenges associated with workplace digitalisation in the construction industry. Findings indicated that the high cost of software is an utmost barrier to workplace digitalisation. The following phase of the study proffers significant insight into the enablement of workplace digitalisation; therefore, several studies illustrate processes, methods and themes associated with the successful digitalisation of the workplace.

Adaptability and Human Asset Capability

In the era of workplace digitalisation, research has consistently highlighted the crucial role of adaptability and the capabilities of the workforce in ensuring the successful implementation of digital technologies, Murugesan, Subramanian, Srivastava, and Dwivedi (2023) utilised statistical package for social sciences (SPSS) tools and analysis of moment structures (AMOS) to investigate the influence of cognitive skills on Smart on the digitalisation

of human resources in Industry 4.0 decision-making analysis. Findings revealed that versatility and human resource functionalities are supported by each of the five AI application domains in the field of human resource enhancements in health and safety are considered crucial elements of AI applications within human resources.

Employee Motivation and Workplace Digitalisation

To further explore the topic of digitalisation in the workplace, a study conducted by Bastari, Eliyana, Syabarrudin, Arief, and Emur (2020) utilised structural equation modelling (SEM) in LISREL 8.8 software to assess the impact of employee motivation on workplace digitalisation efforts of Bank Kalsel in Indonesia. The study involved evaluating tasks and performance using the FULL method on both apps and websites. The findings indicated that motivation, along with perceived ease of use and perceived usefulness, directly influenced the intention of employees to utilise the bank's website and existing applications during the workplace digitalisation process.

Well-defined Digitalisation Strategy

Most research regarding the effects of digital transformation on businesses and employment has primarily concentrated on pinpointing possible job reductions caused by greater automation and digitalisation. This is significantly shaping the ongoing discussions surrounding the consequences of digital evolution on the future of work. However, regarding the benefits of workplace digitalisation and the effective application of digitalisation in the workplace Eurofound (2021), employs a qualitative approach to investigate the diverse applications of three key technologies that play a pivotal role in the digitalisation of business and have a noticeable influence on organisational performance and efficiency across various domains, namely the Internet of Things (IoT). Findings highlighted factors that contribute to the success of digitalisation in the workplace encompassing the utilisation of a well-defined digitalisation strategy consisting of operational phases that involve testing and piloting. Additionally, early communication and collaboration amongst employees, ongoing work, renewal, and training, as well as cooperation with other companies and effective coordination and partnership with relevant organisations, play pivotal roles. These aspects have been identified at varying levels in the academic institutions that were studied. However, it is worth noting that the predominant approach observed is typically hierarchical, which restricts employees' ability to voice concerns and offer feedback based on their own experiences.

Conclusion and Recommendations

This paper offers a comprehensive overview of the limitations and facilitators of workplace digitisation. The study aimed to enhance the understanding of the concept of workplace digitisation, and it revealed that while many workplaces have adopted digital tools and processes, it is crucial to recognise the obstacles that hinder its successful implementation. Consequently, this study provides valuable insights into effectively implementing workplace digitisation strategies. Therefore, to effectively digitise the workplace, it is crucial to prioritise the development of employees' adaptability and skills. Furthermore, the active engagement of employees in the digitalisation process acts as an accelerator. Lastly, having a well-defined digitalisation strategy remains a key component in successfully transitioning to a digital workplace.

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